

ABSTRACT

Disclosed is a method of forming a floating gate in a data flash memory device on which first and second polysilicon films are stacked. After the first polysilicon film is formed, a SiH_4 gas is introduced to decompose SiH_4 and SiO_2 into Si and H_2 and Si and O_2 . A N_2 anneal process is then implemented so that the decomposed H_2 gas and O_2 gas react to a N_2 gas and are then outgassed. Next, a SiH_4 gas and a PH_3 gas are introduced to form the second polysilicon film. A native oxide film within the interface of the first polysilicon film and the second polysilicon film is removed to improve characteristics of the data flash memory device.